



System And Method For Detection Of
Emitter Signals Using Multiple Intercept
Rules
GOUNALIS, Anthony J.
Serial No.: 10/675,542
Docket No.: L0562.70038US00

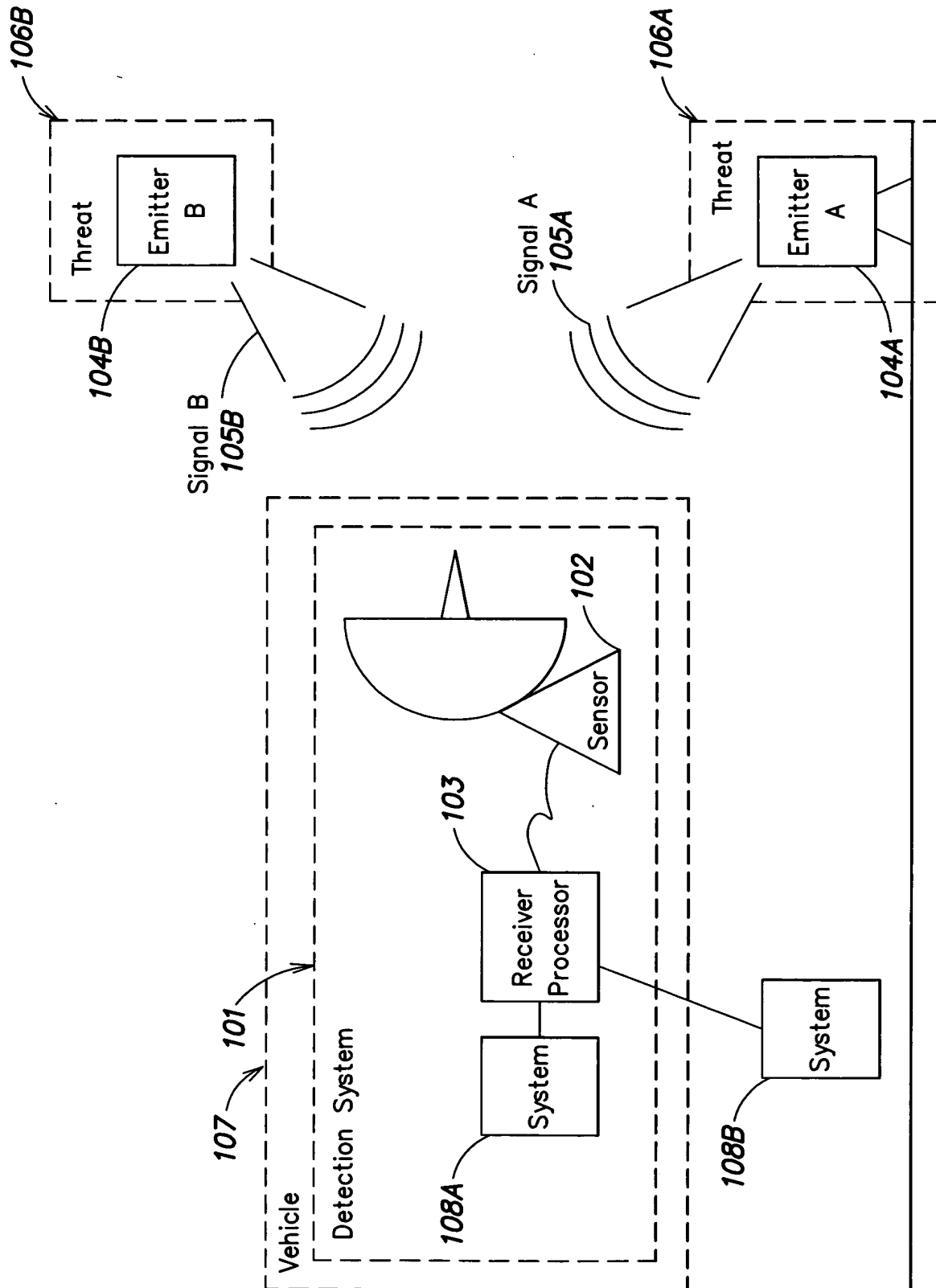


FIG. 1



FIG. 2

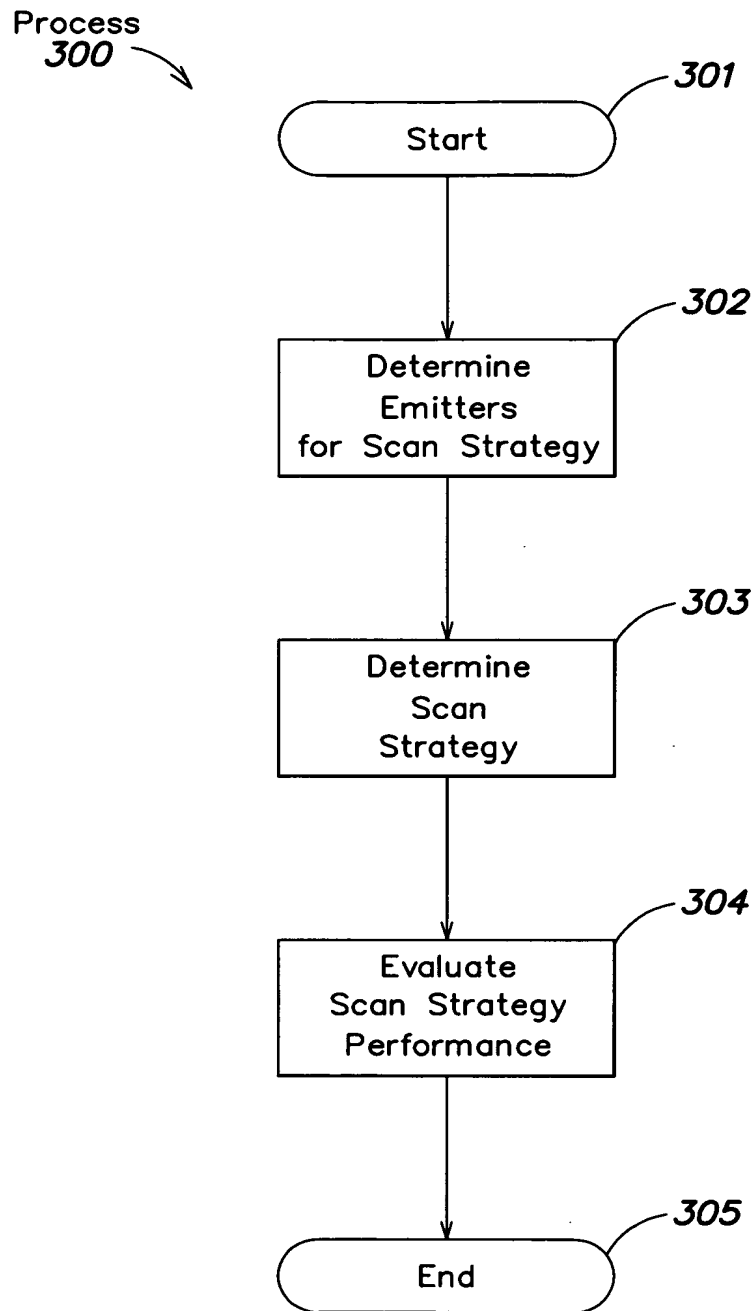


FIG. 3



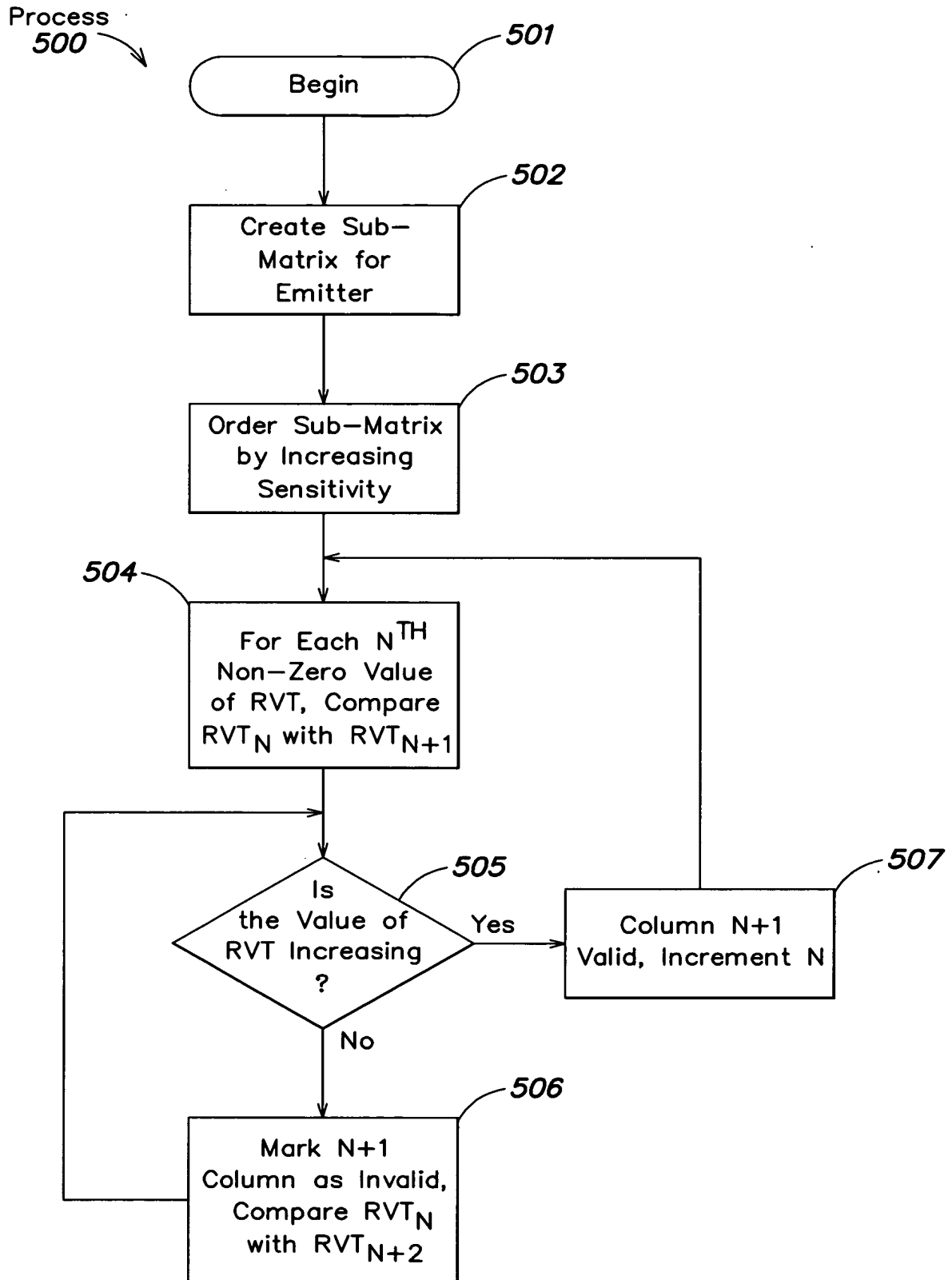


FIG. 5

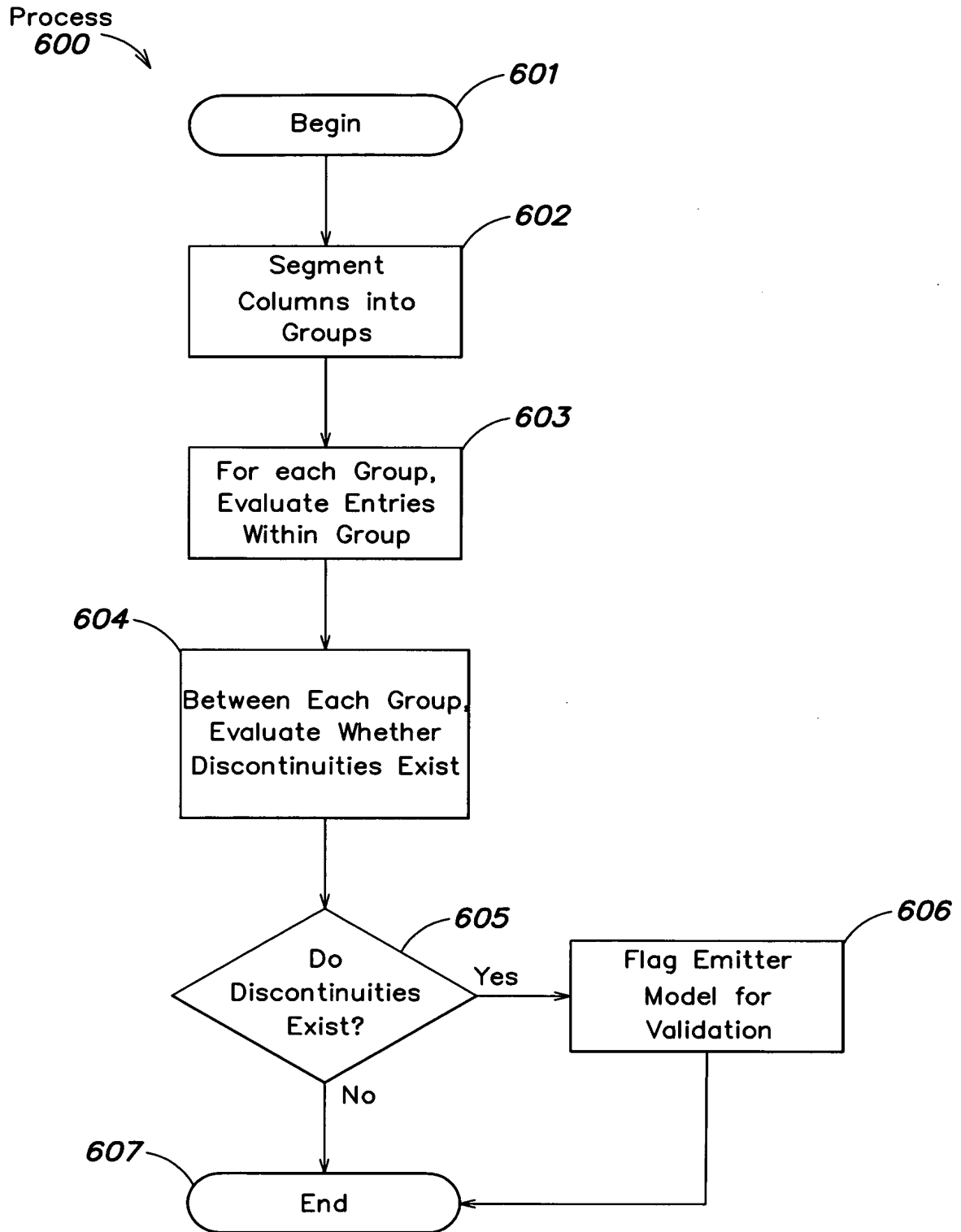


FIG. 6

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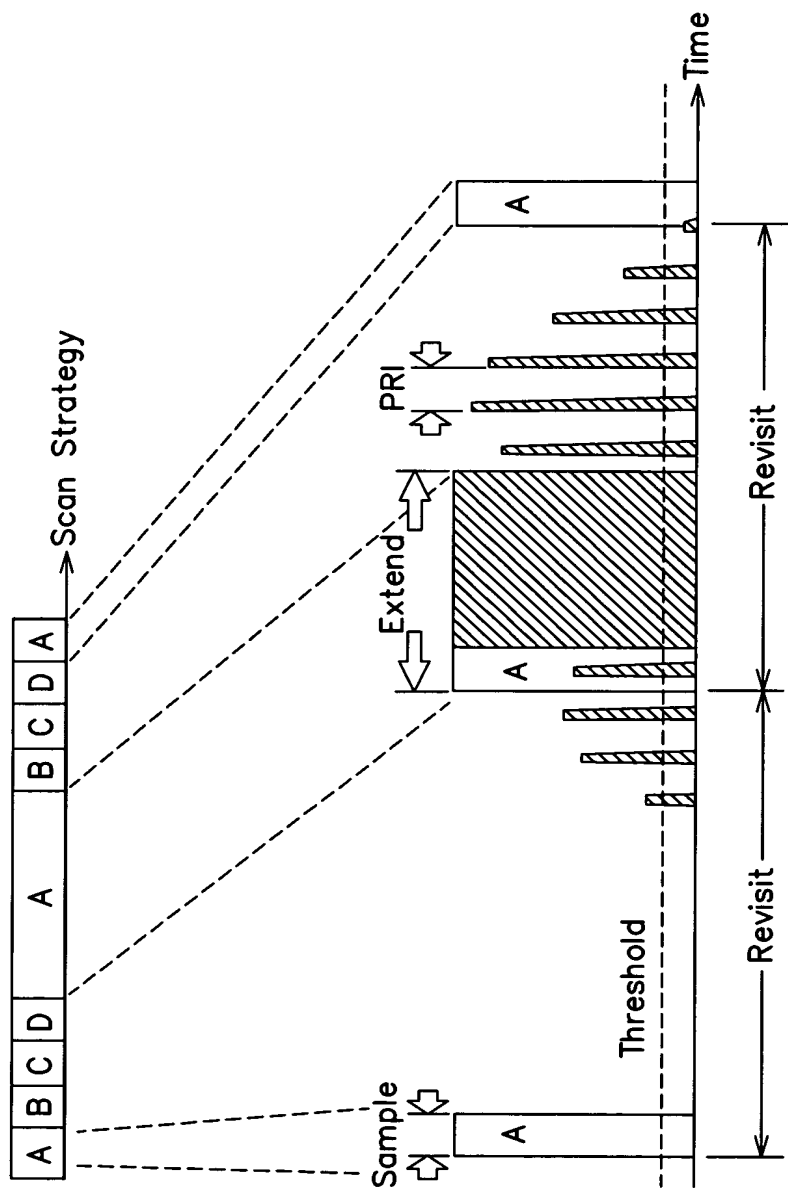


FIG. 7

NO PULSE GROUPING LOGIC:

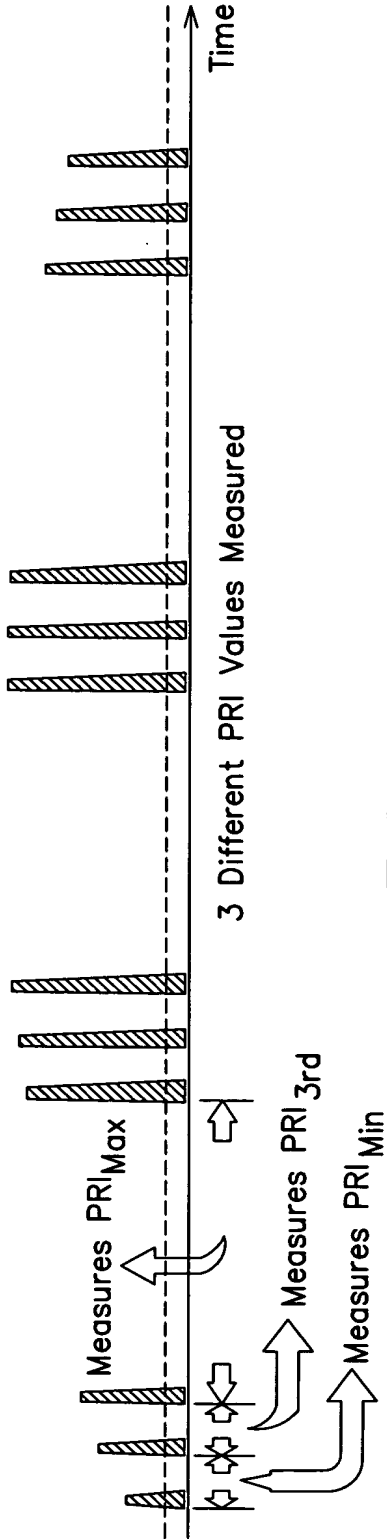


FIG. 8A

WITH PULSE GROUPING LOGIC:

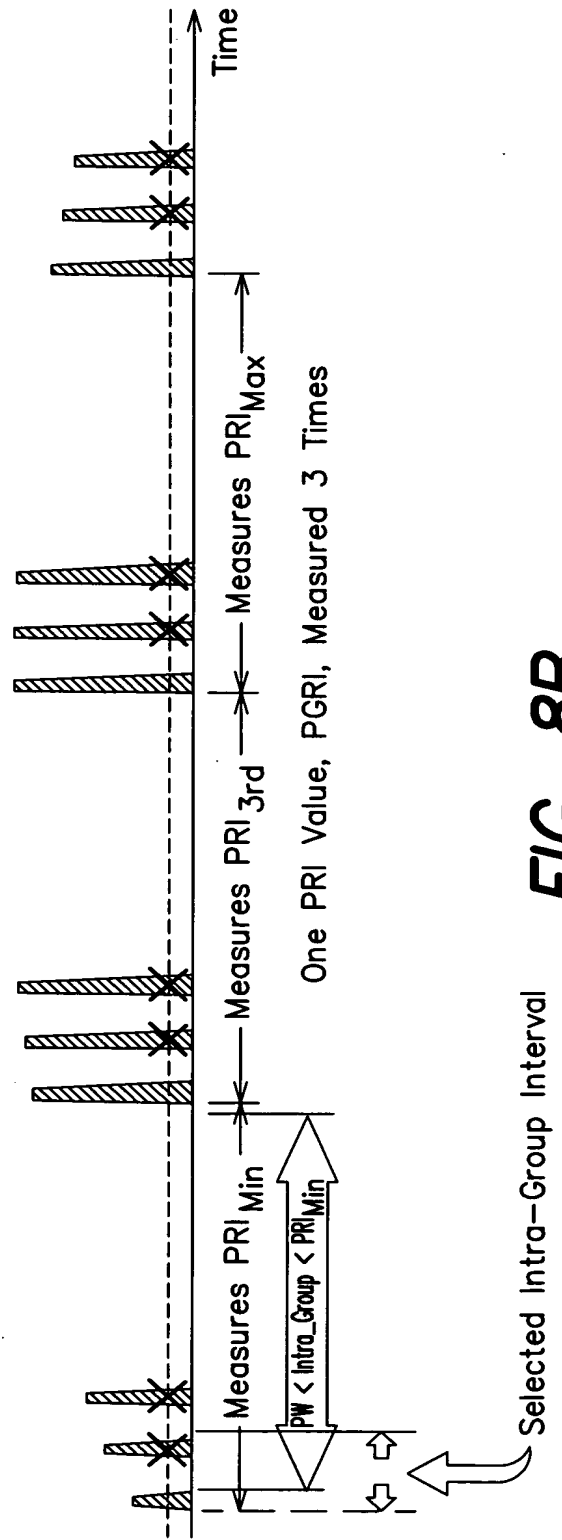


FIG. 8B

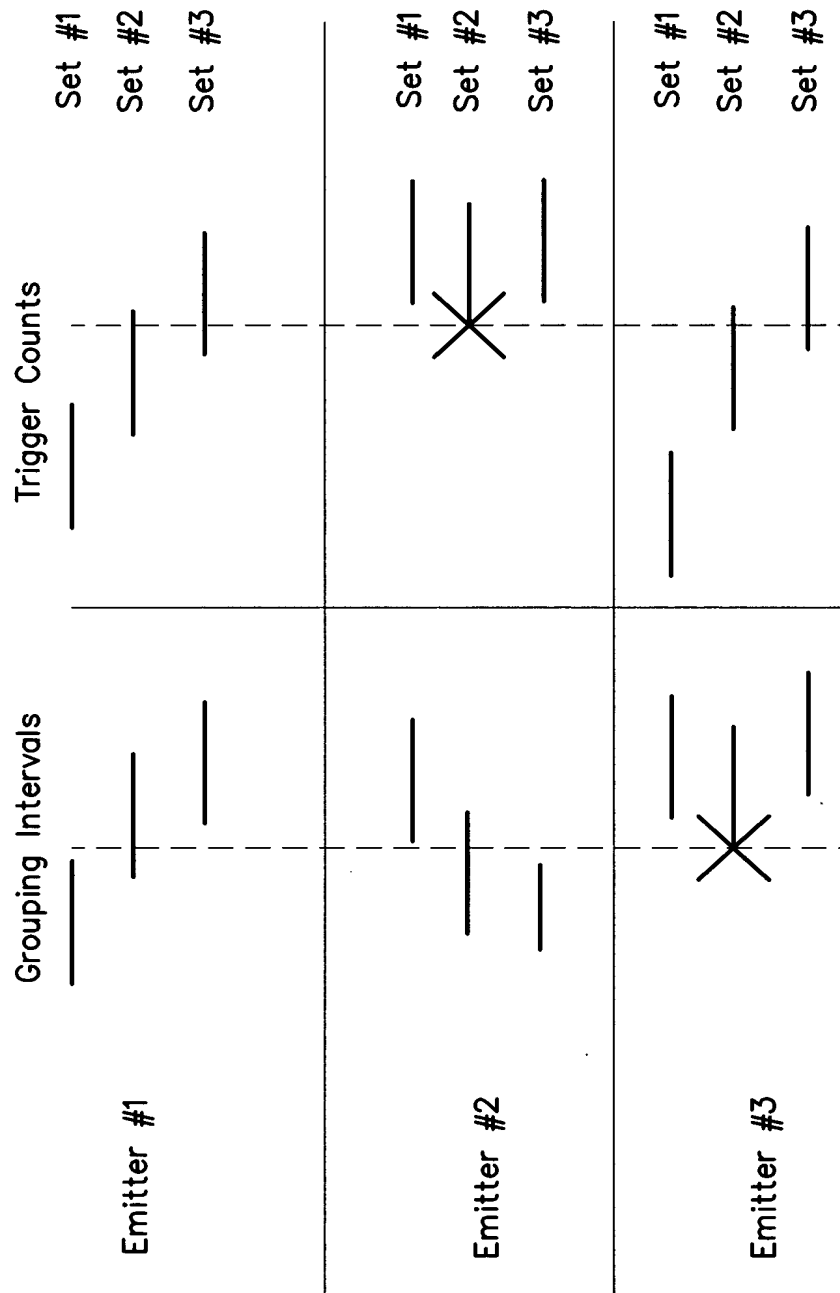
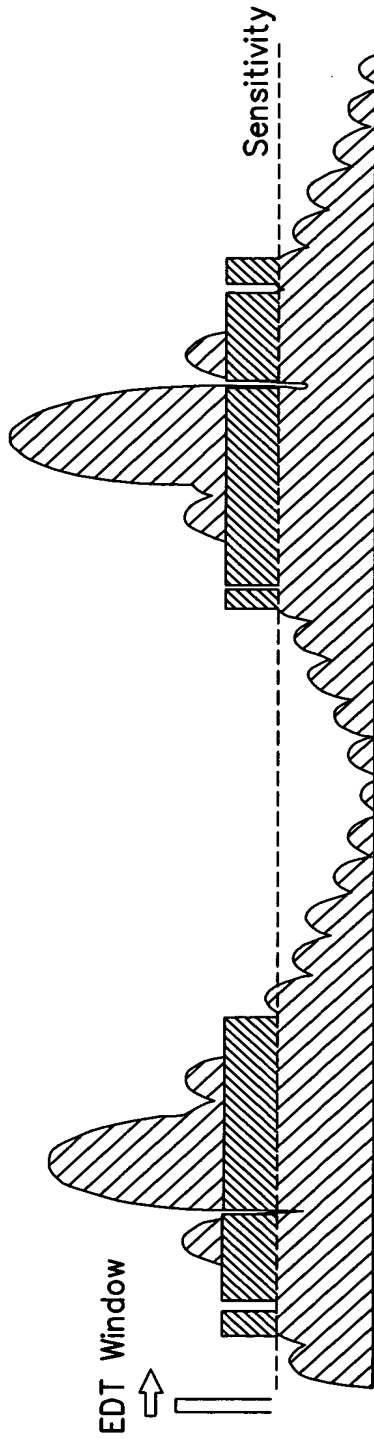
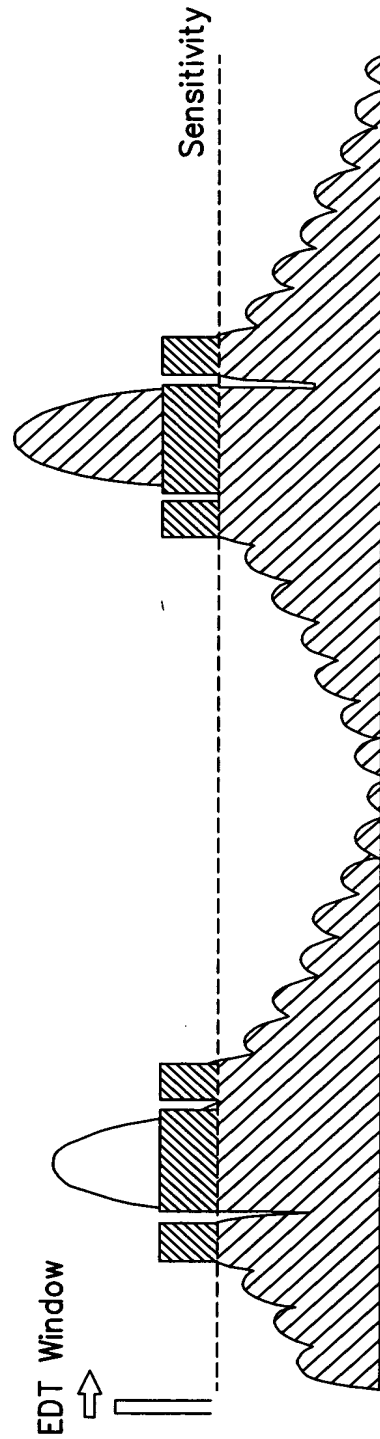


FIG. 9



Discrete Illuminations (TIBS)

FIG. 10A



Discrete Illuminations (TIBS)

FIG. 10B

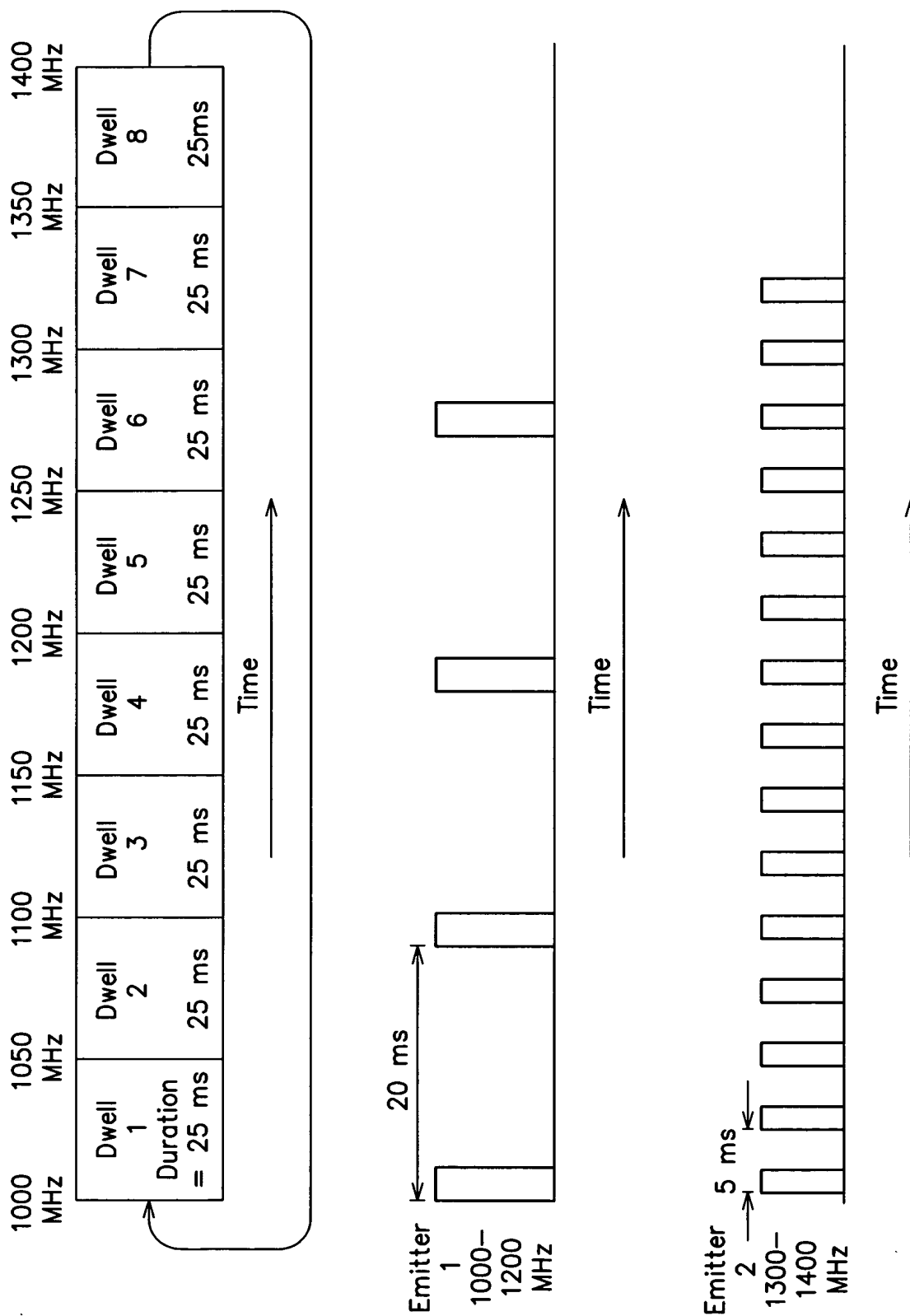


FIG. 11

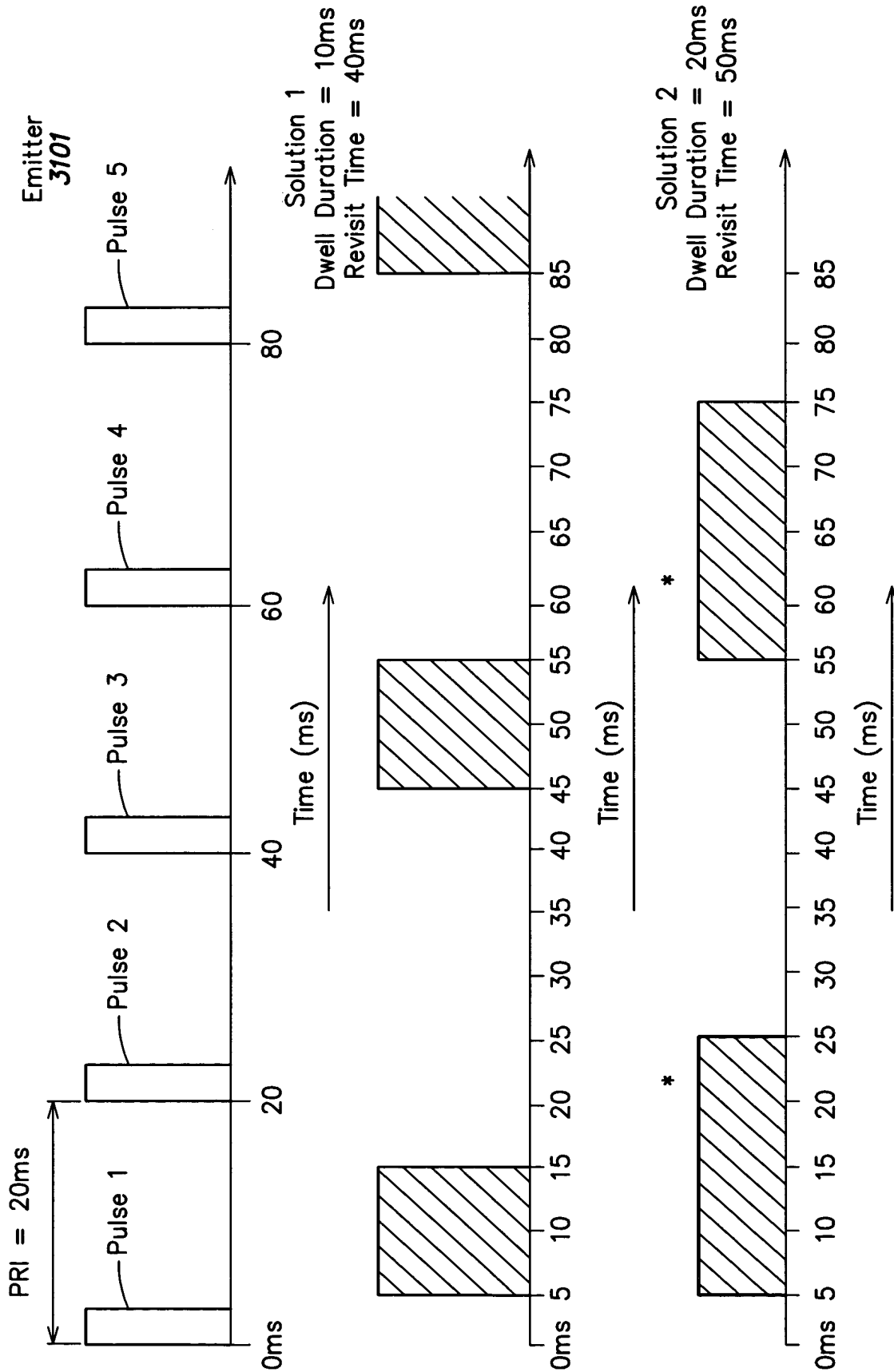


FIG. 12

4000

Emitter Name	Detecting Method 1 250MHz IF/ 15MHz VBW RVT	Detecting Method 2 30MHz IF/ 15MHz VBW RVT	RF Min (MHz)	RF Max (MHz)	Min MDT (ms)
E1	100 ms	650 ms	1000	1300	3
E2	120 ms	780 ms	1220	1350	5
E3	110 ms	330 ms	1510	1810	2
E4	130 ms	390 ms	1730	1860	4

FIG. 13

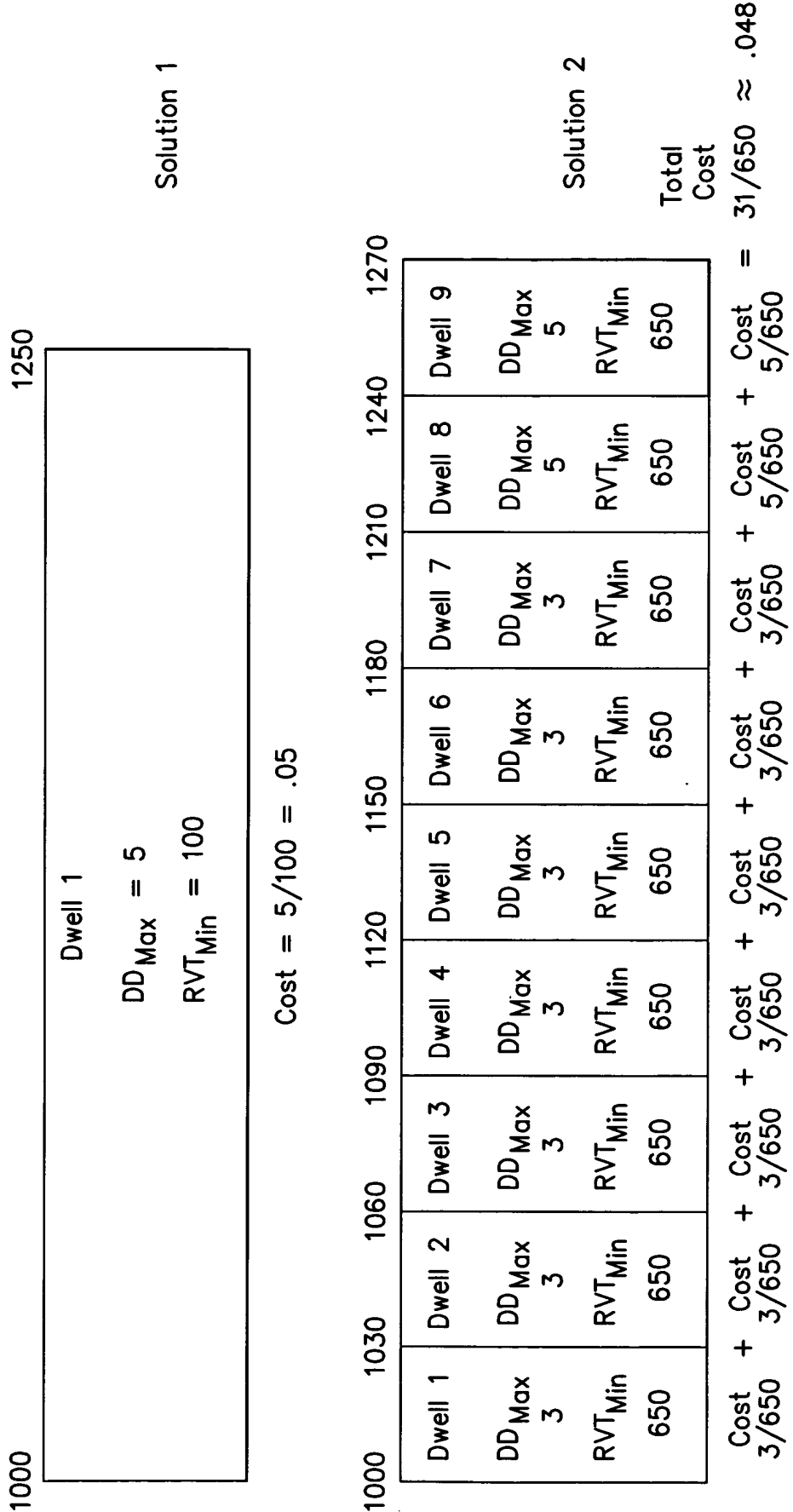


FIG. 14A

1510

1760

Dwell 1		
DD _{Max} = 4 ms		
RVT _{Min} = 330 ms		

Solution 1

$$\text{Cost} = 4/330 = .012$$

1510 1540 1570 1600 1630 1660 1690 1720 1750 1780

Dwell 1	Dwell 2	Dwell 3	Dwell 4	Dwell 5	Dwell 6	Dwell 7	Dwell 8	Dwell 9
DD _{Max} 2	DD _{Max} 2	DD _{Max} 2	DD _{Max} 2	DD _{Max} 2	DD _{Max} 2	DD _{Max} 2	DD _{Max} 4	DD _{Max} 4
RVT _{Min} 330 ms	RVT _{Min} 330 ms	RVT _{Min} 330 ms	RVT _{Min} 330 ms	RVT _{Min} 330 ms	RVT _{Min} 330 ms	RVT _{Min} 330 ms	RVT _{Min} 330 ms	RVT _{Min} 330 ms

Solution 2

$$\text{Cost} + \frac{\text{Cost}}{2/330} + \frac{\text{Cost}}{2/330} + \frac{\text{Cost}}{2/330} + \frac{\text{Cost}}{2/330} + \frac{\text{Cost}}{2/330} + \frac{\text{Cost}}{2/330} + \frac{\text{Cost}}{4/330} + \frac{\text{Cost}}{4/330} = \frac{22}{330} = .06$$

FIG. 14B

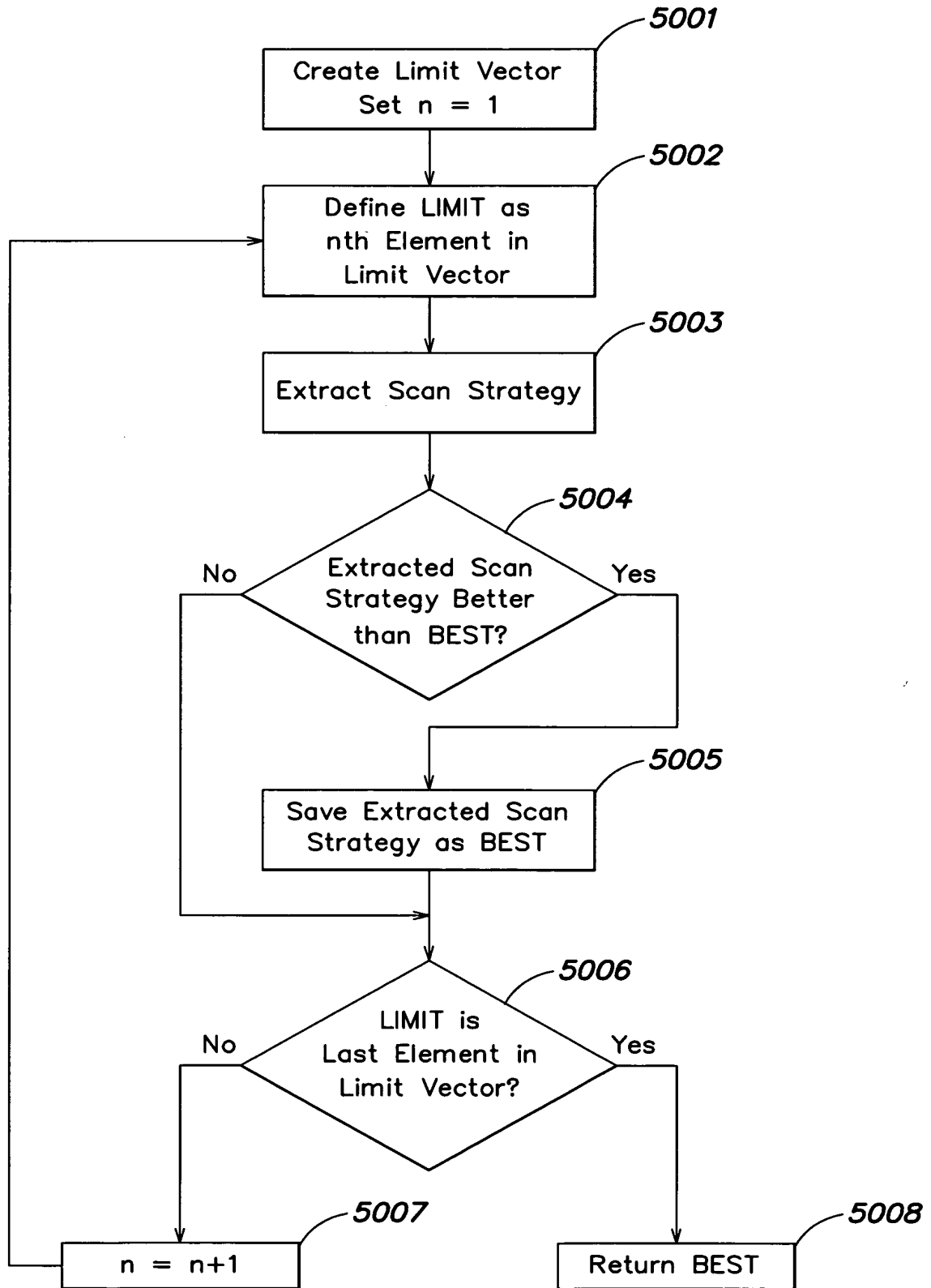


FIG. 15

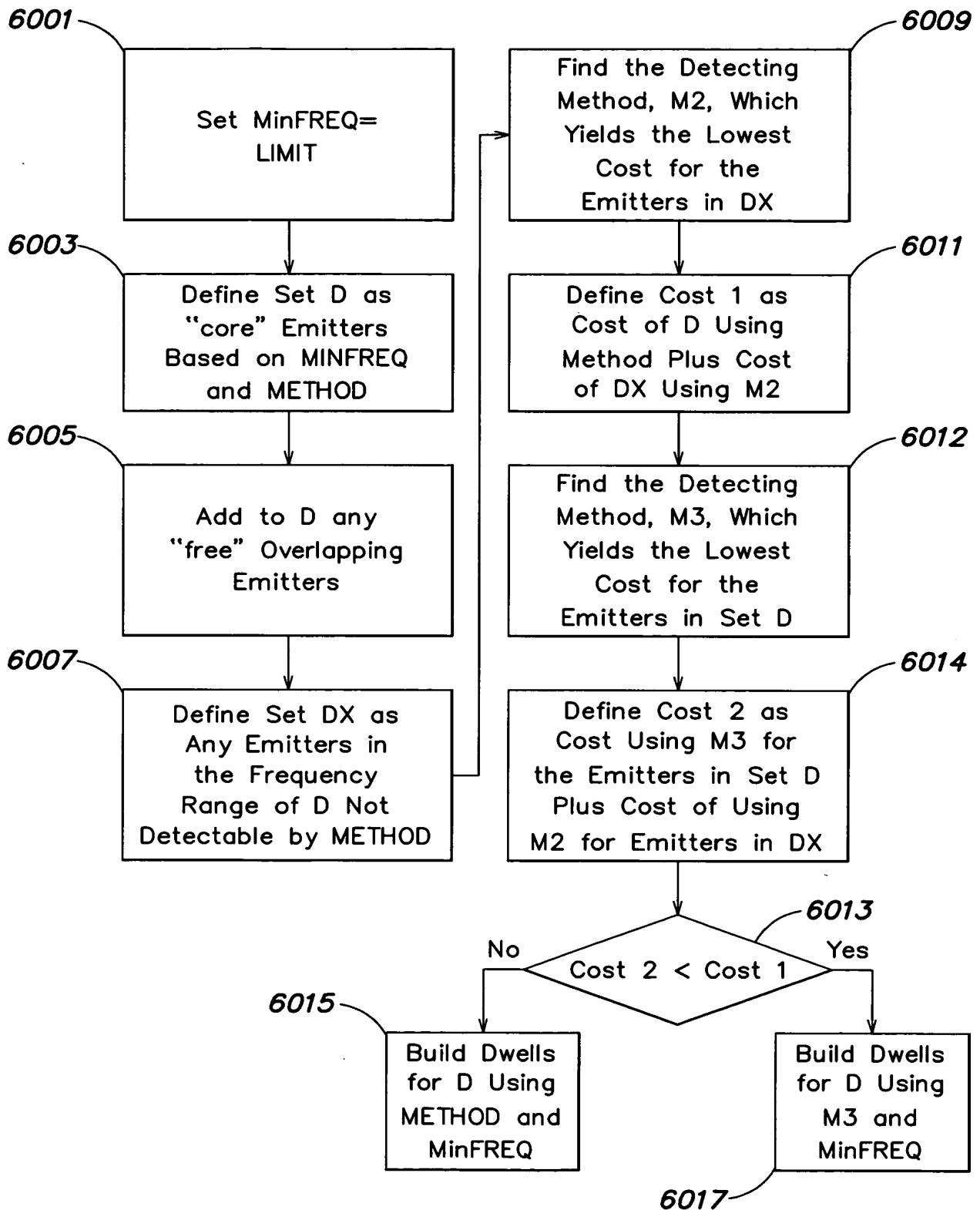


FIG. 16

Name	RF Min	RF Max
E1	1100	1200
E2	1150	1250

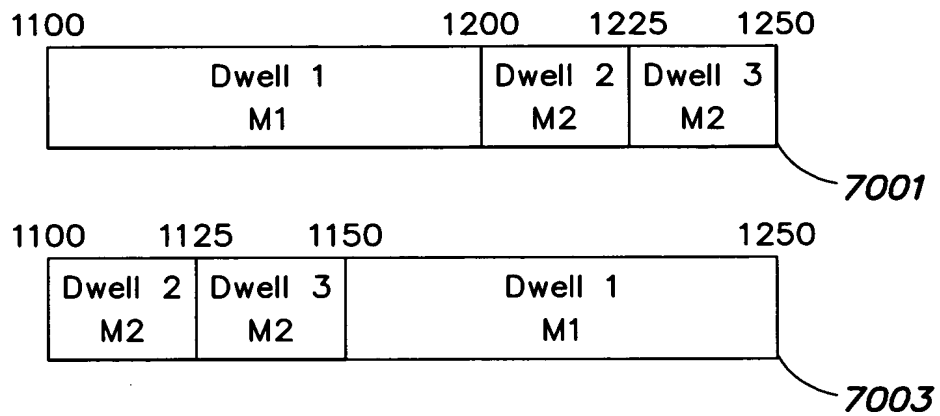


FIG. 17

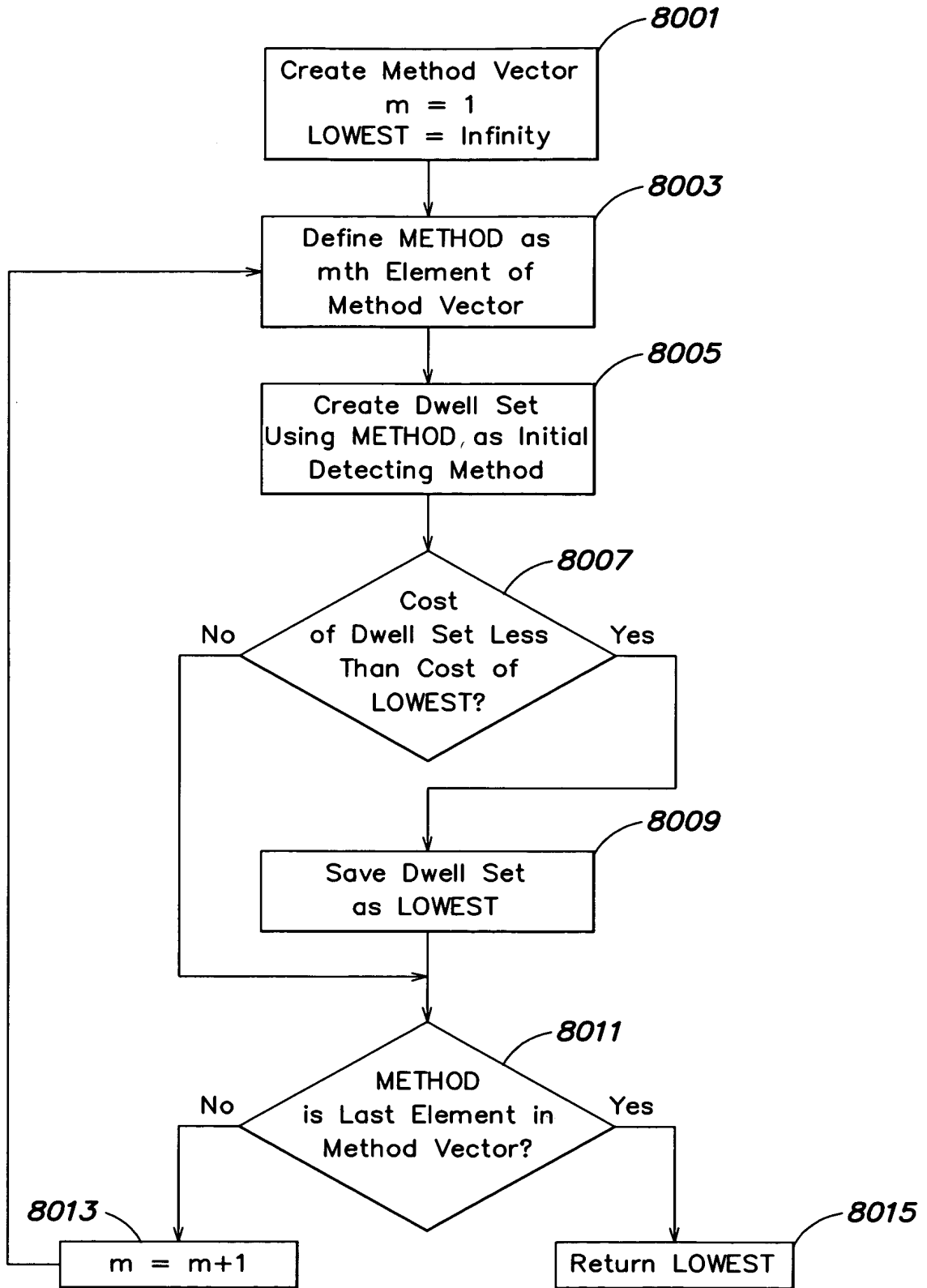


FIG. 18

Emitter	Dwell Duration (ms)	Revisit Time (ms)
Emitter 1	1	500
Emitter 2	2	1200

FIG. 19

Emitter	Dwell Duration (ms)	Revisit Time (ms)	Cost
Emitter 1	1	500	.002
Emitter 2	5	1000	.005

FIG. 20

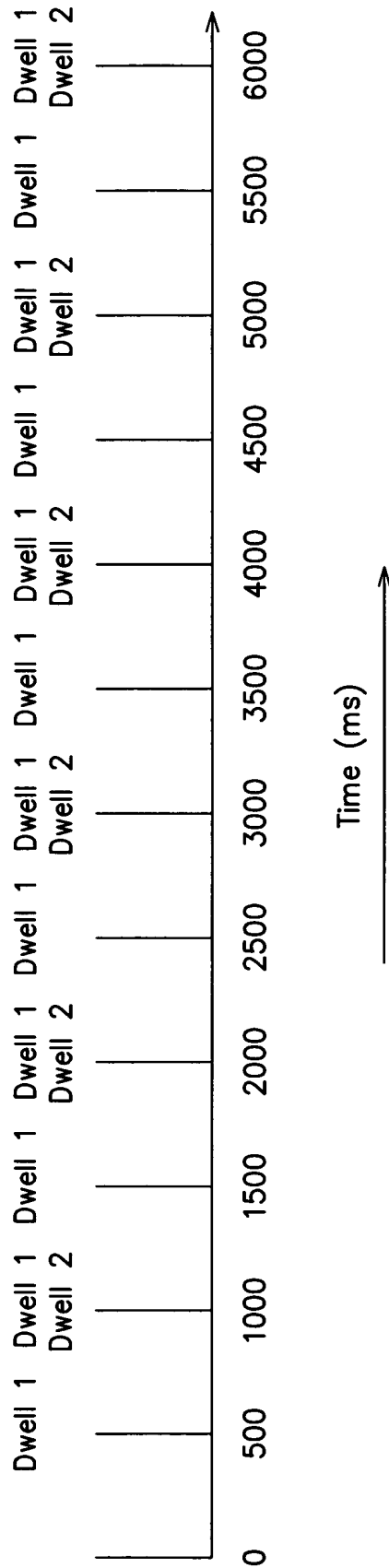


FIG. 21

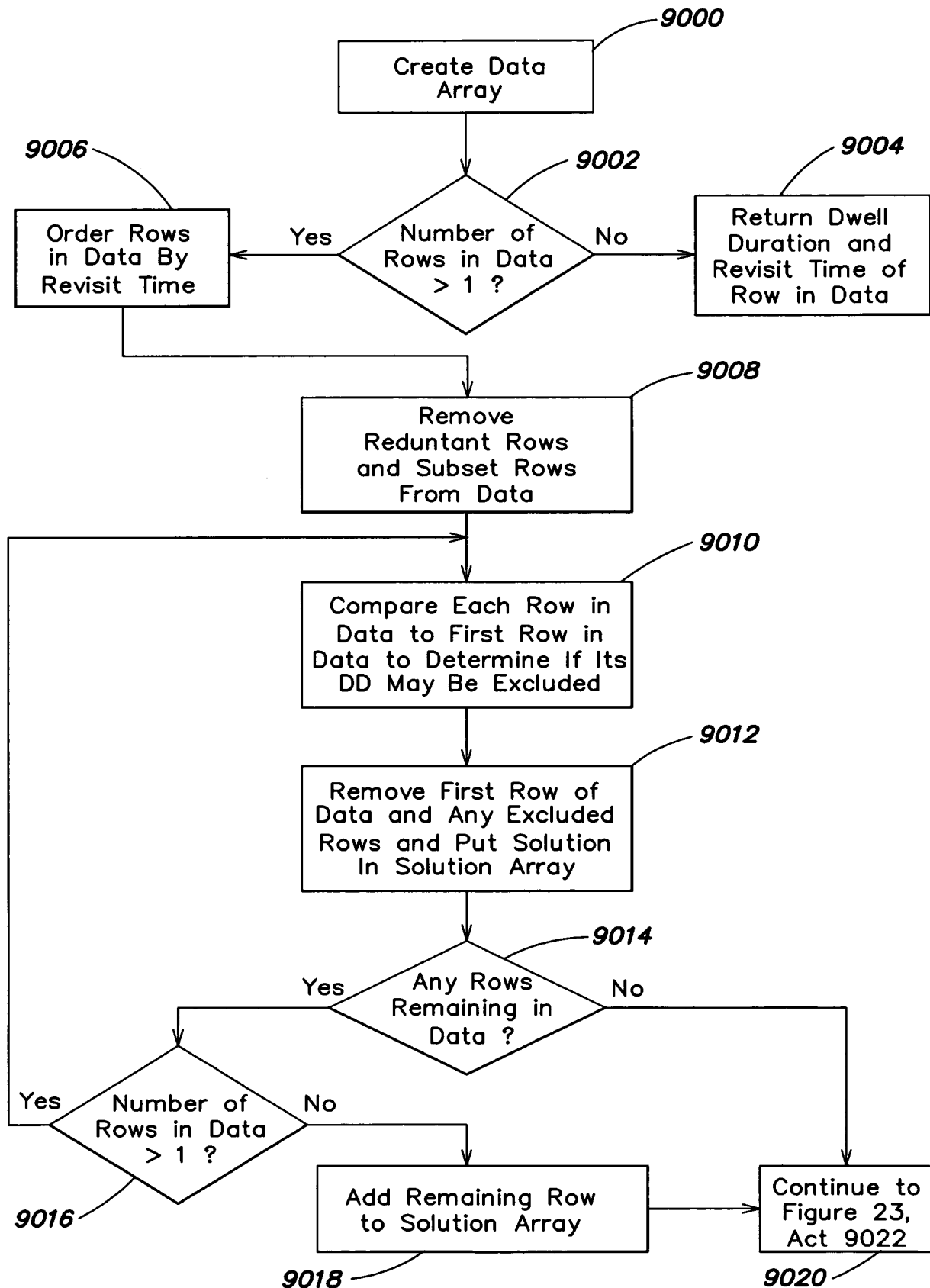


FIG. 22

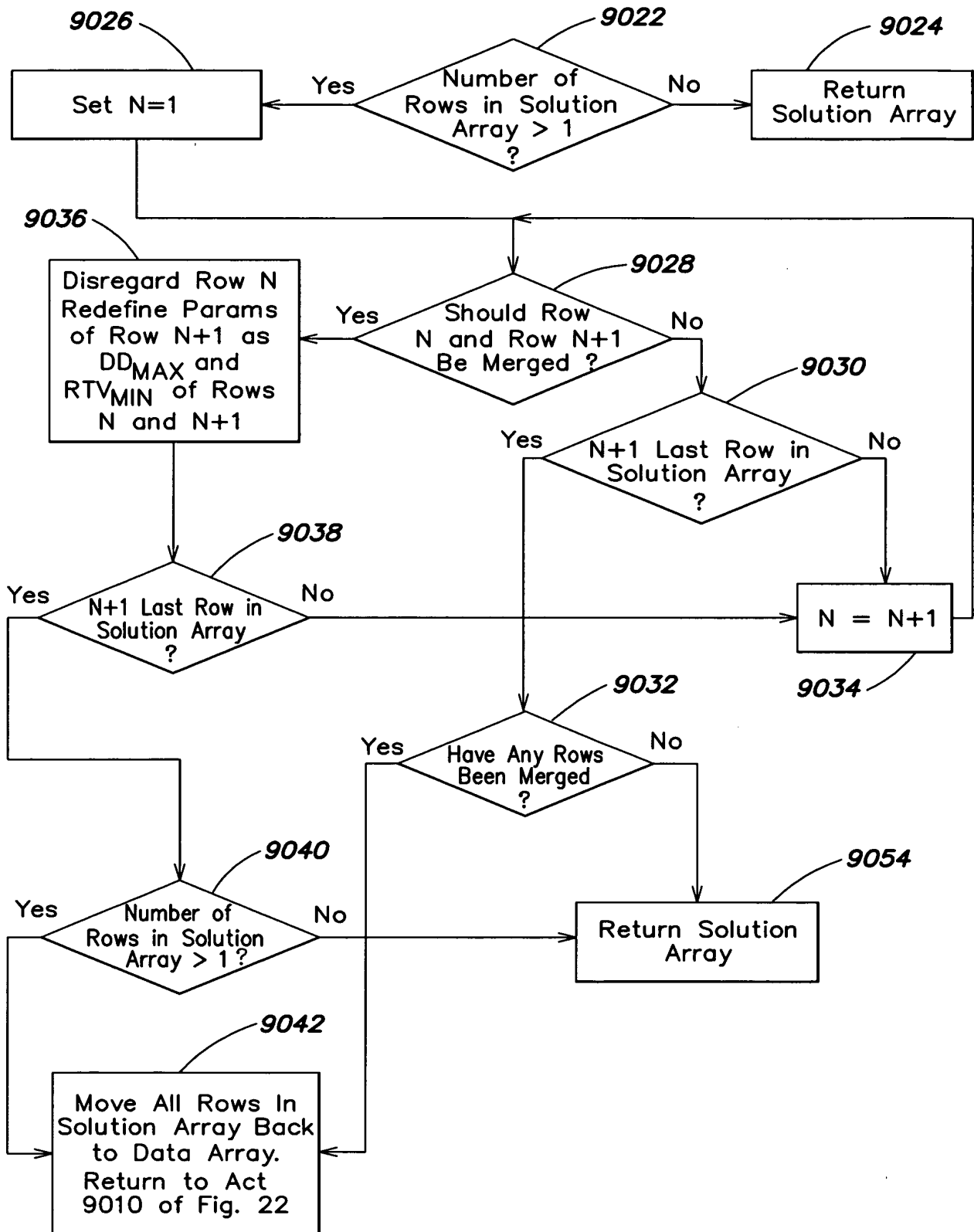


FIG. 23

9044

Data		
MDT	EDT	RVT
1	7	500
2	9	700
2.3	11	800
3	19	2000
3.05	17	2868

9051

9052

9044

Data		
MDT	EDT	RVT
1	7	500
2	9	700
2.3	11	800
0.5	3.5	1000
3	19	2000
3	19	2000
3.05	17	2868

9048

9049

9050

9044

Data		
MDT	EDT	RVT
3.05	17	2868
3	19	2000
3	19	2000
1	7	500
2	9	700
2.3	11	800
0.5	3.5	1000

FIG. 24C

FIG. 24B

FIG. 24A

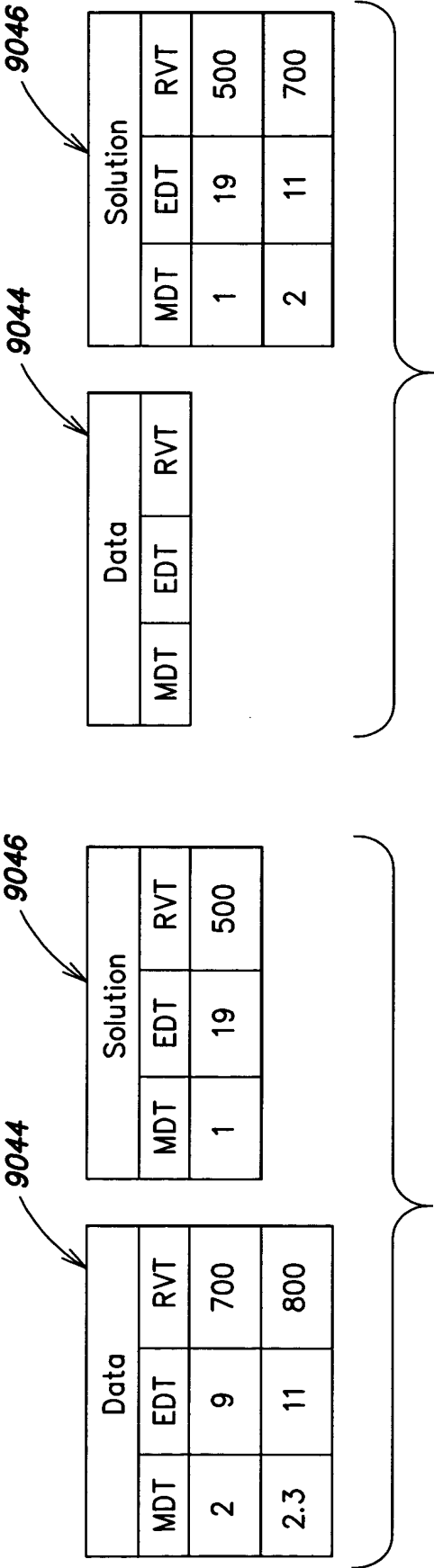


FIG. 24E

FIG. 24D

Table illustrating data for FIG. 24F.

Solution		
MDT	EDT	RVT
1	19	500
2	11	700

FIG. 24F

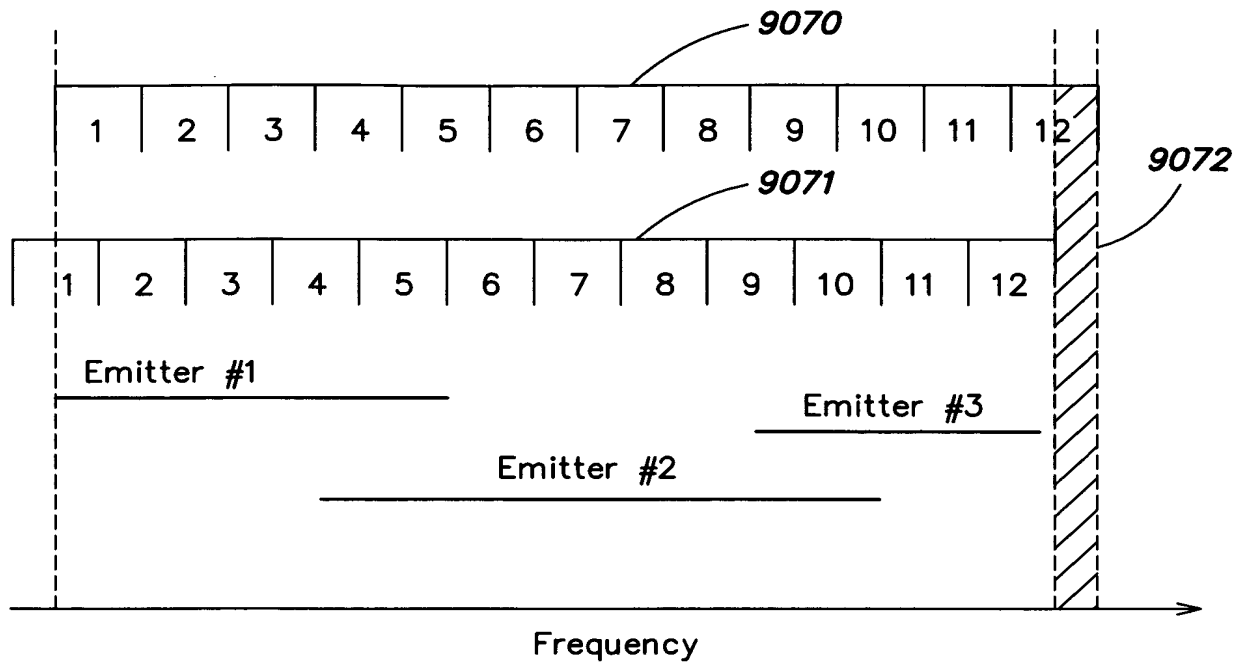


FIG. 25

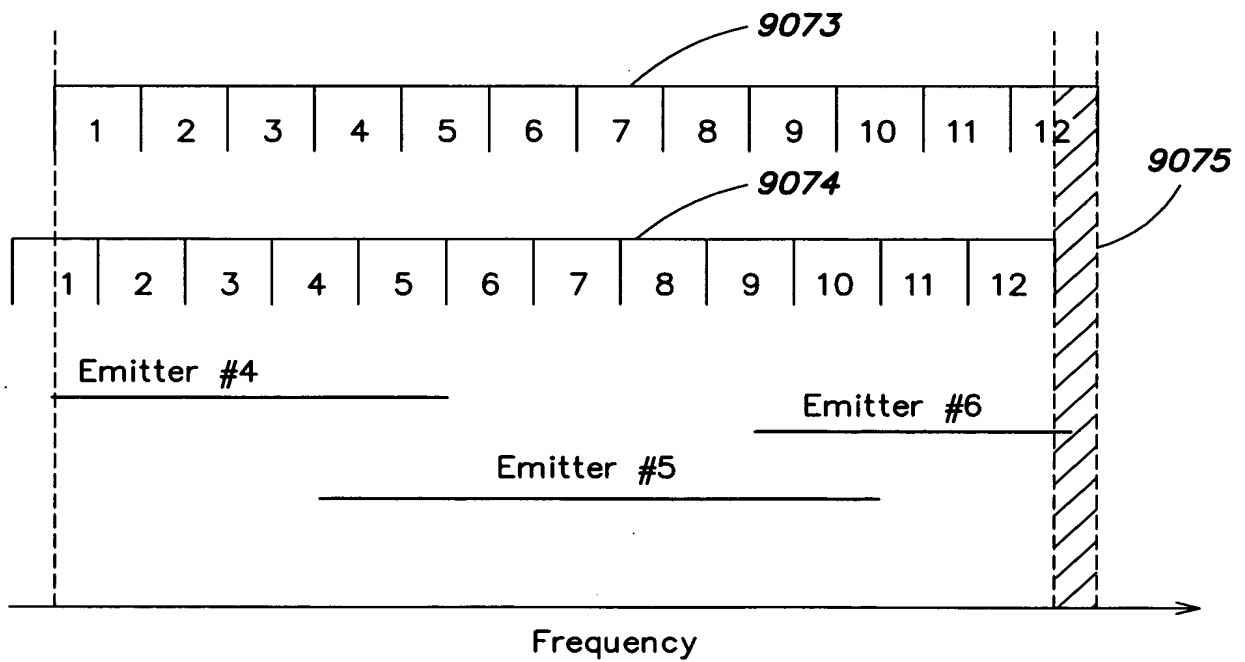


FIG. 26

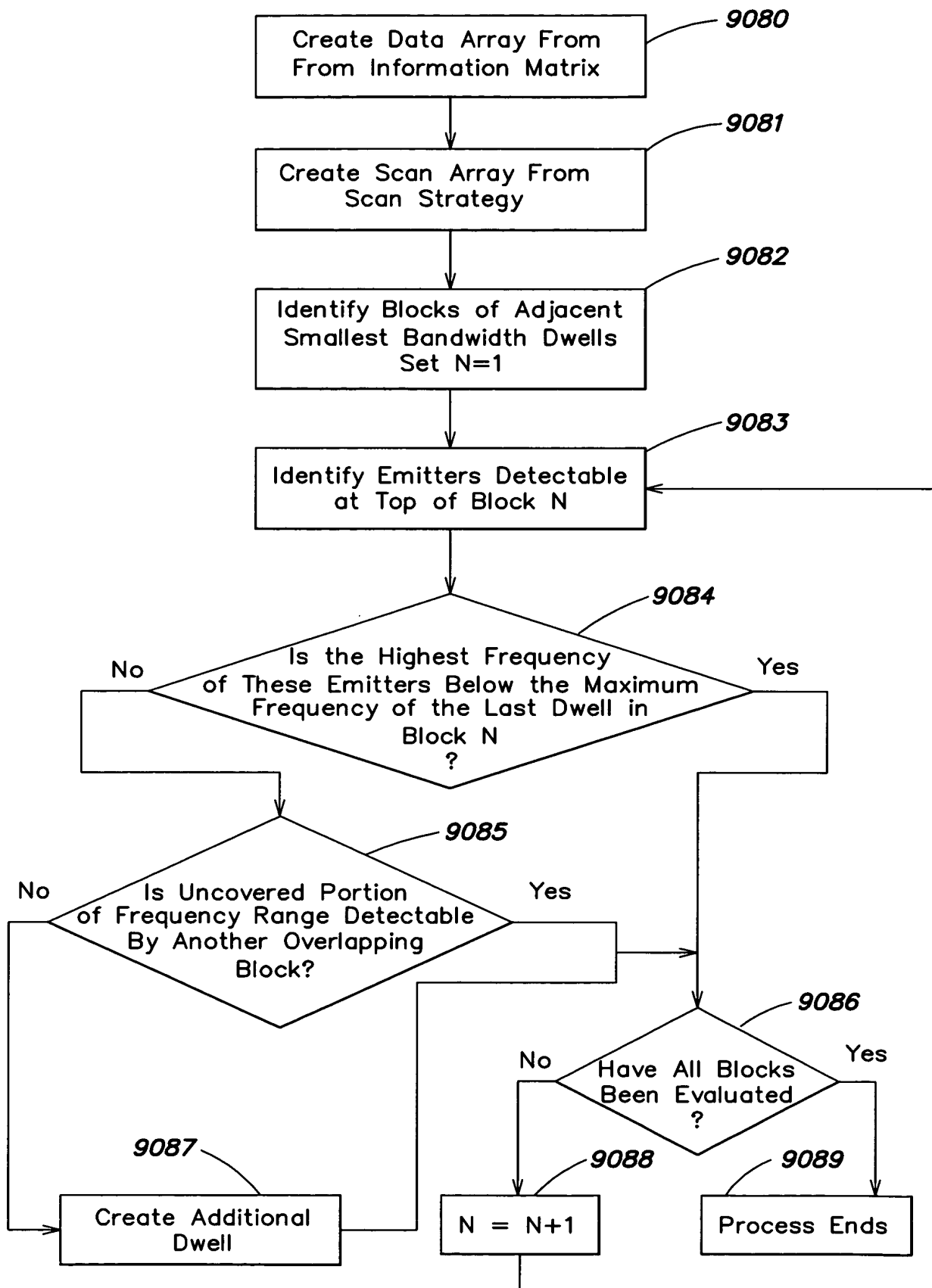
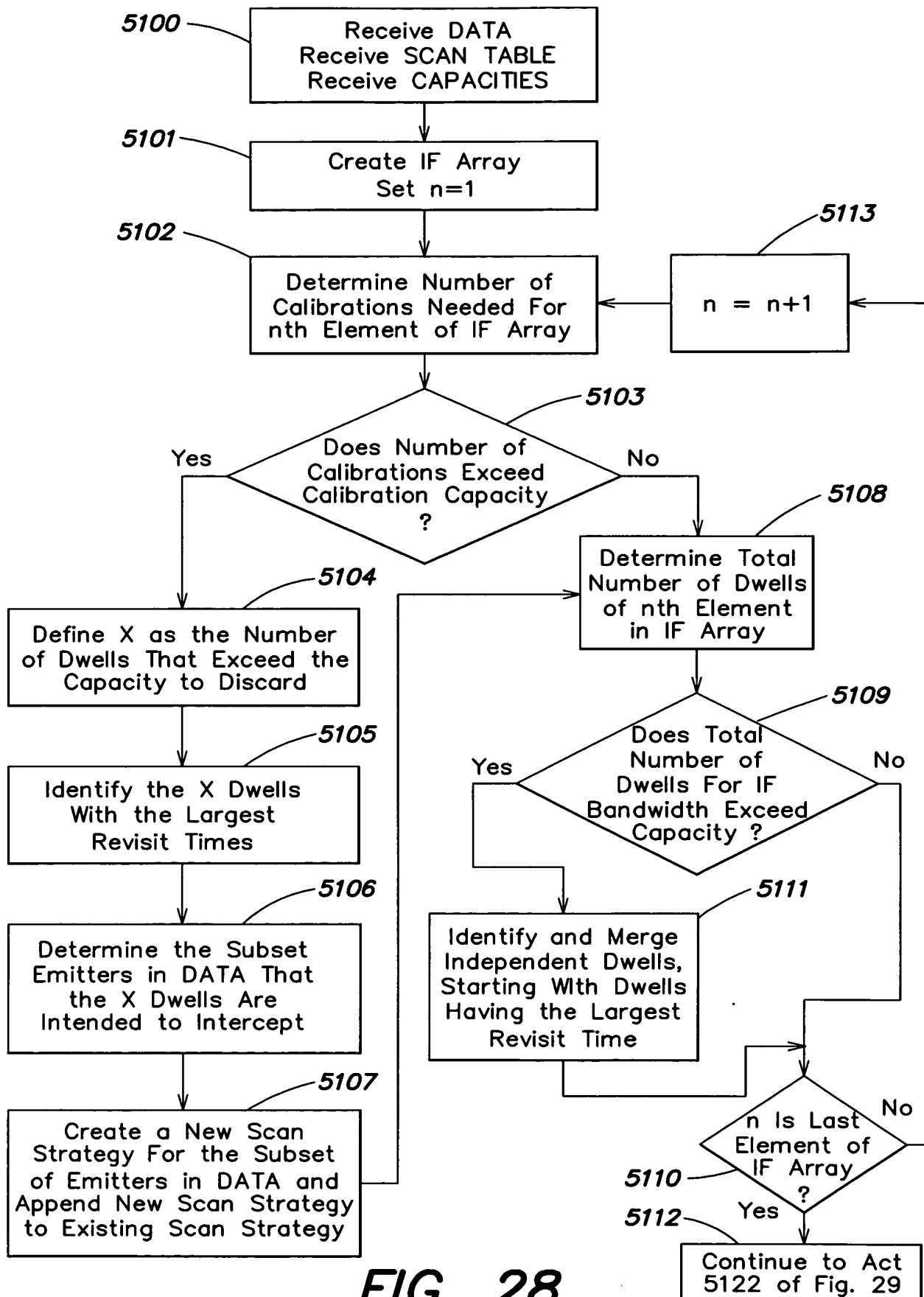


FIG. 27



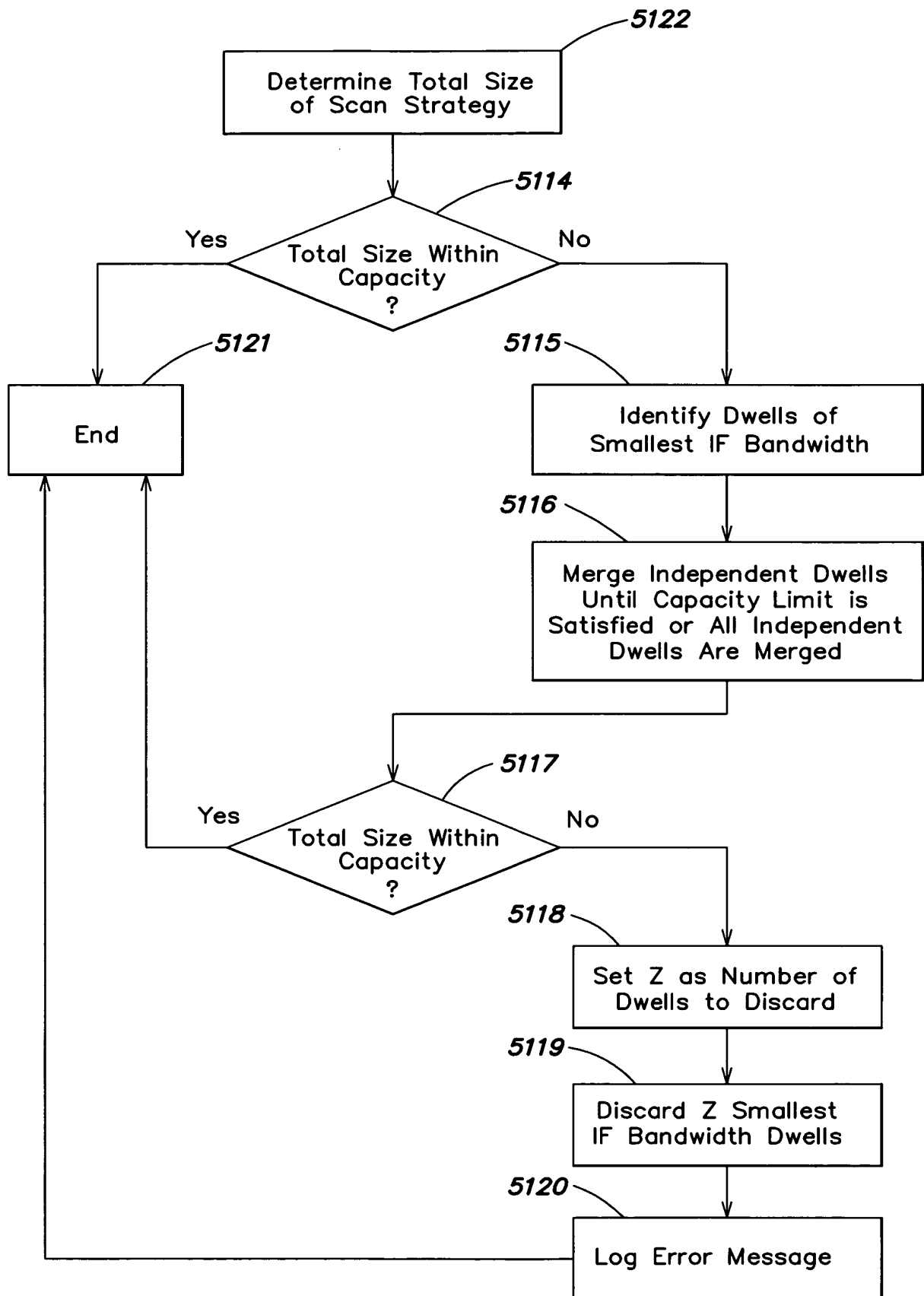


FIG. 29

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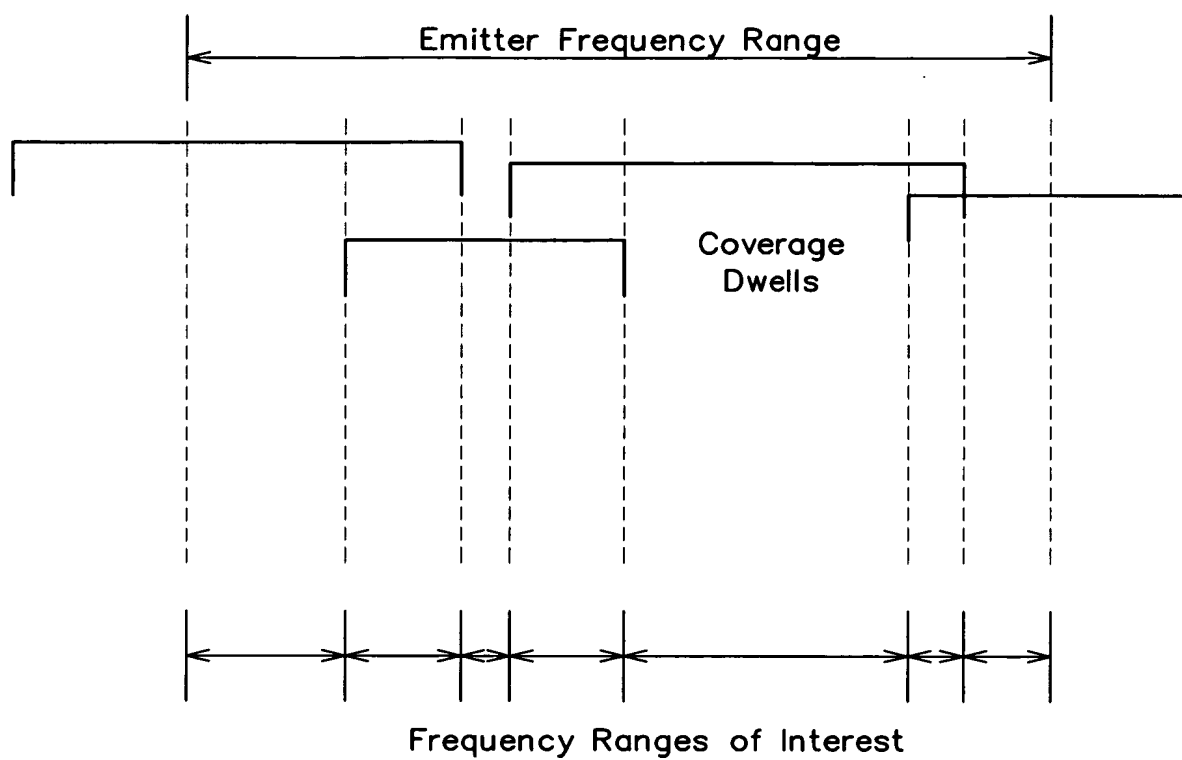


FIG. 30

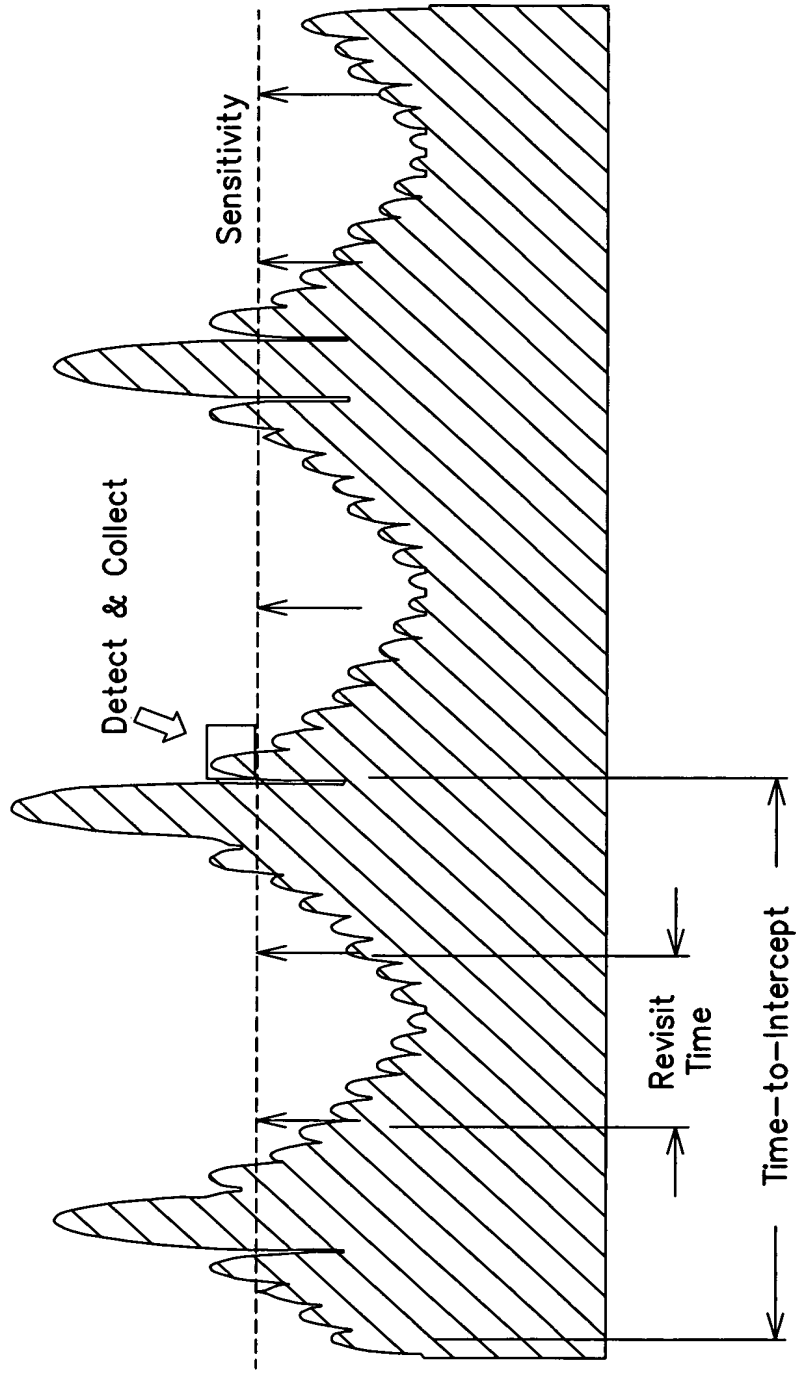


FIG. 31

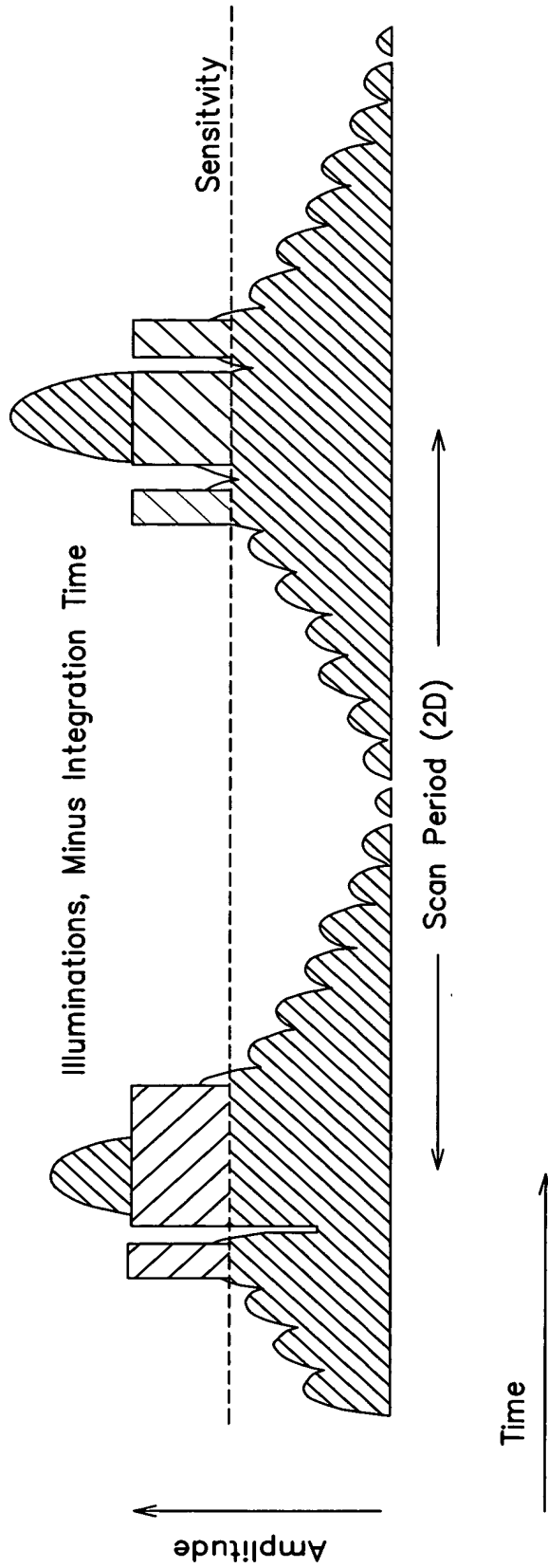


FIG. 32